



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Via U.S. Postal Service and Electronic Mail

October 29, 2012

Base Realignment and Closure Division
ATTN: Mr. Warren Switzer
Project Manager Army BRAC-D Office
2530 Crystal Drive Room 500
Taylor Building/NC3
Arlington, VA 22202
Warren.h.switzer.civ@mail.mil

Re: Polychlorinated Biphenyls (PCBs), Toxic Substances Control Act (TSCA) – Amendment 1 to USEPA R9 Phase 1 Approval of U.S. Army / LRA PCB Cleanup Document – Riverbank Army Ammunition Plant, Riverbank, California

Dear Mr. Warren Switzer:

Thank you for your electronic mail (e-mail) messages (attached) dated September 27, 2012 and September 19, 2012. Those messages requested the U.S. Environmental Protection Agency Region 9 (USEPA) to amend several conditions in its September 4, 2012 Phase 1 Approval of the U.S. Army (Army) and Local Redevelopment Authority's (LRA's)¹ PCB Cleanup Document (PCD)². In this letter, USEPA is modifying and/or clarifying several of its conditions in that Approval in response to your request. Therefore, this letter serves as Amendment 1 to USEPA's September 4, 2012 Phase 1 Approval. Cleanup of PCBs is being conducted at the Riverbank Army Ammunition Plant (RAAP).

This Amendment is based on USEPA's September 14, 2012 e-mail message (attached) summarizing preliminary responses to the Army's request for an amendment to the Phase 1 Approval.³ Furthermore, the Army/LRA and USEPA discussed the requested amendments and USEPA's preliminary response during our conference call and meeting on September 13 and 20, 2012, respectively.

¹ The LRA is the City of Riverbank.

² The PCB Cleanup Document (PCD) is the "Request for TSCA Risk-Based Disposal and Decontamination Approval Removal of PCB-Containing Gabbos Siding and Cleanup of Residual Siding Particles from Building and Equipment Riverbank Army Ammunition Plant" dated May 10, 2012.

³ September 14, 2012 message sent at 3: 00 PM to the Army (James P. McAllister) and LRA's consultant (John Woodyard, Weston Solutions).

Mr. Warren Switzer
Re: Riverbank Army Ammunition Plant
USEPA Amendment 1, Phase 1 Approval
October 29, 2012

USEPA Amendment 1, Phase 1 Approval - Army/LRA PCD for the RAAP

The conditions in this approval do not replace or supersede the conditions in the September 4, 2012 Phase 1 Approval unless specified below.

1. Amendment to Condition A.2 (Equipment, items, and materials not covered by this approval). In accordance with 40 CFR 761.61(a)(5)(B)(2)(ii) instead of conducting sampling of the waste, a cleanup party may assume the waste contains PCB concentrations above 50 mg/kg total PCBs. This assumption is made in reference to PCB bulk remediation waste. Under 40 CFR 761.61(c), USEPA is allowing the application of this assumption to disposal of porous surfaces (e.g., concrete, wood) and cleanup wastes. This assumption is not applicable to non-porous surfaces and non-porous surfaces that are coated. Porous surfaces, non-porous surfaces, and cleanup wastes are types of PCB remediation wastes.

If the Army/LRA plans to dispose non-porous surfaces via a smelter or recovery oven the waste must be sampled to determine the actual PCB concentration. Sampling and analysis of the waste is necessary for smelter compliance with the requirements in 40 CFR 761.72. See Condition 3, September 4, 2012 Phase 1 Approval.

Items not covered under this approval and that do not meet the definition of PCB remediation waste are subject to the applicable disposal requirements in other sections of the PCB regulations in Subpart D and any state and local regulations that may apply.

2. Amendment to Deadlines in Conditions A.1 (July 17, 2012 building contents inventory), A.3 (Sampling and analysis plan), B.8 (Sequence of equipment cleanup), and B.9 (Oil-filled equipment). The Army /LRA have proposed to submit the deliverables in (1) Conditions A.1 and A.3 within 30 days, (2) Condition B.8 within 45 days, and (3) Condition B.9 within 60 days after the date of the September 20, 2012 meeting.

USEPA is modifying the deliverable schedule for Conditions A.1, A.3, B.8, and B.9 as established in the table below.

September 4, 2012 Conditions of Approval	USEPA Original Schedule	USEPA Revised Schedule
A.1, July 17, 2012 Building contents Inventory.	Within 30 days after 09/04/2012 approval.	Within 60 days after 09/20/2012 meeting.
A.3, Sampling and analysis plan.	Within 30 days after 09/04/2012 approval.	Within 60 days after 09/20/2012 meeting.
B.8, Sequence of equipment cleanup.	Within 30 days after 09/04/2012 approval.	Within 60 days after 09/20/2012 meeting.
B.9, Oil-filled equipment.	Within 30 days after 09/04/2012 approval.	Within 90 days after 09/20/2012 meeting.

Mr. Warren Switzer
Re: Riverbank Army Ammunition Plant
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In addition, USEPA clarifies that Condition B.9 (Oil-filled equipment) applies to both personal and real property items within the RAAP.

- 3. Amendment to Condition A.3 in relation to extraction method.** The TSCA PCB regulations in 40 CFR 761.272 require the use of either the Soxhlet or Ultrasonic extraction Methods 3540C or 3550B, respectively. However, both extraction methods may not be equally effective in extracting PCBs from certain matrices such as soils and solids. The latest revision of the Ultrasonic extraction method is Method 3550C. The Scope and Application section of that method states that:

“... Because of the limited contact time between the solvent and the sample, ultrasonic extraction may not be as rigorous as other extraction methods for soils/solids.”

USEPA believes that Soxhlet extraction may be a more efficient extraction method for bulk product than Ultrasonic extraction. USEPA will evaluate the results of surrogate recoveries and other laboratory quality control samples in context to the matrix being analyzed. If the Army / LRA prefer the ultrasonic extraction (EPA Method 3550C), submit a side-by-side comparison of analytical results for a limited number of bulk product samples analyzed via USEPA Method 8082A after extracted via Ultrasonic and Soxhlet methods.

- 4. Amendment to Condition B.1.a (Coating on metal equipment [Coated non-porous surfaces]).** USEPA is amending this condition to add the use of chemical strippers to remove paint from certain items (e.g., large hydraulic presses) that would be damaged or their mechanical parts be compromised by the use of abrasives to remove the paint. The testing required in Condition B.1.a must be conducted. The Revised Inventory required in Condition A.1 of USEPA's Phase 1 Approval must indicate which items in that Inventory will be subject to chemical stripping and abrasives.

In addition, spent stripper and/or spent abrasives (cleanup residues) can be temporarily stored in containers at the cleanup site that meet DOT requirements for PCB containing waste. The waste must be stored in a manner that prevents releases to the environment. Such containerized waste must be transported to the selected off-site disposal facility within 30 days after waste generation.

The concentration for disposal of cleanup residues must be based on analysis of the actual waste. The Army/LRA may assume the cleanup residues contain PCBs at levels equal to or above 50 mg/kg and shall dispose of the waste consistent with the requirements for disposal of PCBs at that concentration. Disposal of liquid PCB remediation waste must be in accordance with the requirements in 40 CFR 761.61(b).

- 5. Amendment to Condition B.2.a (Preparation of equipment for transportation to offsite disposal facility).** This Condition already allows the use of solvents to “wipe down” equipment or items planned for transportation offsite. USEPA is amending Condition B.2.a

to allow the use of vacuuming to clean and detergent to "wipe down" items at the RAAP identified for offsite disposal in the Revised Inventory required in Condition A.1. However, the Army / LRA must describe in the Inventory the disposal method for the generated cleanup waste (e.g., vacuumed dust, vacuum cleaner parts not amenable to decontamination). Methods to decontaminate the vacuum cleaner and associated parts that contacted PCBs must also be included in the inventory.

The use of pressure washing is not a preferred alternative due to the large volumes of waste that would be generated and need for proper containment of the water during cleanup of items or equipment.

However, USEPA is allowing pressure washing under the condition that:

- (a) A minimum volume of water is used for pressure washing,
- (b) The containment system be demonstrated not to leak and to be of a capacity large enough to contain all the water being used for cleanup (including photos of such containment), and
- (c) The water be tested for PCBs to determine the applicable disposal method.

If water from pressure washing activities will be treated onsite at the RAAP, the Army/LRA must propose the treatment method that will be used for USEPA approval. Filtration of the water is allowed under the current regulations. The spent filtration media would be subject to disposal under the TSCA PCB regulations.

6. **Condition B.3.a (Metal surfaces [e.g., equipment, parts] in contact with non-liquid PCBs (e.g., paint containing PCBs)).** Sampling methods for disposal of PCB waste must be included in the SAP requested in Condition A.3. The approach to conduct sampling required in Condition B.3a must be described in the SAP. The September 4, 2012 Approval covers cleanup and disposal of "items" (defined in the Approval to include equipment and materials) at the RAAP. Decisions to dispose of certain items via a smelter or recovery oven must be supported by proper sampling and analysis of the waste. Disposal via a smelter must be supported by proper sampling of items that will be subject to that type of disposal. The Army / LRA may consult with the smelter or recovery oven facility of their choosing on waste sampling methodology when drafting the SAP required in Condition A.3.

7. **Condition B.4.a (Testing and cleanup of tenant equipment).** This Condition remains as established in the September 4, 2012 Phase 1 Approval. However, USEPA clarifies that cleanup of fixed tenant equipment can be conducted under the future Phase 2 Approval.

8. **Condition B.6 (Land disposal of PCB remediation and PCB bulk product wastes).**
Clarification. PCB remediation wastes with a total PCB concentration of less than 50 mg/kg must be disposed consistent with the requirements in 40 CFR 761.61(a)(5). Disposal requirements are established in that section of the regulation for each type of PCB remediation waste.

Mr. Warren Switzer
Re: Riverbank Army Ammunition Plant
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In addition to the above, USEPA clarifies that under 40 CFR 761.61(c), sampling and cleanup of PCBs must be conducted in accordance with plans approved by USEPA. Depending on circumstances, storage for disposal and disposal of PCBs may also need prior approval from USEPA.

USEPA appreciates the opportunity to assist the Army/LRA on the PCB matters associated with the Riverbank Army Ammunition Plant. If you have any questions concerning the amendments to the Phase 1 Approval, please call Carmen D. Santos at 415.972.3360. Thank you for your cooperation.

Sincerely,



for Jeff Scott, Director
Waste Management Division

Enclosures (3)

Cc Via Electronic Mail Only

James P. McAllister, USACOE
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Debbie Olsen, Riverbank Local Redevelopment Authority
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John Woodyard, Weston Solutions, Inc.
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Mr. Warren Switzer
Re: Riverbank Army Ammunition Plant
USEPA Amendment 1, Phase 1 Approval
October 29, 2012

Steve Armann, USEPA R9 - WMD
Armann.steve@epa.gov

Carmen D. Santos, USEPA R9 - WMD
Santos.carmen@epa.gov

PCBs: Riverbank Army Ammunition Plant - Follow Up to September 13, 2012 Conference Call
Carmen Santos

to:

James.p.mcalister, John. Woodyard
09/14/2012 03:08 PM

Cc:

DOlson, Carmen Santos

Hide Details

From: Carmen Santos/R9/USEPA/US

To: James.p.mcalister@usace.army.mil, John. Woodyard@WestonSolutions.com,

Cc: DOlson@riverbankkra.org, Carmen Santos/R9/USEPA/US@EPA

Hello James and John:

Thank you for the dialogue that we had via conference call on September 13, 2012 regarding the Army / LRA's comments on certain conditions in EPA's September 4, 2012 PCB cleanup approval under 40 CFR 761.61(c) (Approval) for equipment at the RAAP. I understand the Army / LRA may formally request an amendment to that Approval. We recommend that agreements be reached amongst the Army, LRA, and EPA on matters the Army / LRA intend to propose in an amendment request before that request is submitted to EPA for approval. This approach will expedite review of the Army / LRA's future amendment. During the September 13, 2012 call, the Army Corp of Engineers (Mr. James McAlister) and Weston Solutions (Mr. John Woodyard) represented the Army and LRA, respectively.

In connection to the summary presented below, I am making here some general clarifications also communicated during our conference call. The September 4, 2012 Approval is similar to a permit. As such, the conditions in that approval must be implemented as established in the approval unless amended by EPA. The September 4, 2012 Approval is in general for personal property (i.e., building contents that are not at this time part of the real property). However, in relation to cleanup of some of the equipment that is currently part of the real property, some of the Conditions in the September 4, 2012 may also be applicable and as such are likely to be referenced in the future EPA Phase 2 Approval. In addition, under 40 CFR 761.61(c), characterization and cleanup of PCBs must be conducted in accordance with plans approved by EPA and not before receipt of such approval. Certain disposal issues may also be subject to this same requirement.

I am also clarifying that Condition B.9 (Oil-filled equipment) applies to both personal and real property items within the RAAP. This clarification was not addressed during the September 13, 2012 conference call.

Below is a brief summary of the high points of our dialogue. This summary includes preliminary responses provided by me during the September 13, 2012 call based on an extremely limited information exchange during that call. The preliminary responses provided below do not amend the September 4, 2012 Approval and are presented below only for informational purposes and to facilitate a summary of the September 13, 2012 dialogue with the Army and LRA.

Summary of September 13, 2012 Conference Call Amongst Army, LRA, and EPA Region 9

1. Condition A.2 (Equipment, items, and materials not covered by this approval): The Army / LRA propose that instead of testing the equipment, items, and materials addressed in Condition A.2 that they be able to assume for offsite disposal purposes that all the equipment, items, and materials addressed in Condition A.2 contain or it is contaminated with PCBs at levels equal to or above 50 mg/kg (ppm). **EPA's preliminary response:** 40 CFR 761.61(a)(5)(B)(ii) allows the use of such an assumption for disposal in lieu of sampling but only in connection to Bulk PCB Remediation Waste, which does not include porous (e.g., concrete) and non-porous (e.g., uncoated metal) surfaces. EPA will look further-into the Army / LRA's request in context to the 761.61(c) regulatory requirements.

2. Deadlines in Conditions A.1 (July 17, 2012 building contents inventory), A.3 (Sampling and analysis plan), and B.8 (Sequence of equipment cleanup): The Army / LRA plan to request extensions to these deadlines which EPA established in response to the urgency expressed by the Army / LRA in moving forward with equipment cleanup. **EPA's preliminary response:** EPA will consider the Army / LRA's request in context to the overall project schedule the Army has offered to provide to EPA.

3. Condition B.1.a (Coating on metal . . . Third paragraph under "Cleanup verification (testing)"): The Army / LRA mentioned they have no plans on selling equipment or items to parties outside the RAAP and that requirements in the third paragraph under *Cleanup verification (testing)* may not be necessary. **EPA's preliminary response:** EPA has no assurances from the Army / LRA that personal property (that is the subject of the September 4, 2012 Approval) will not be distributed in commerce to parties outside the RAAP.

4. Conditions B.3.a (Metal surfaces [e.g., equipment, parts] in contact with non-liquid PCBs (e.g., paint containing PCBs): The Army / LRA have asked if they can work directly with the smelter to determine the level of sampling necessary to determine if the waste is amenable to smelting. **EPA's preliminary response:** Sampling methods for disposal of PCB waste must be included in the SAP requested in Condition A.3. The approach to conduct the sampling required in Condition B.3.a must be included in the SAP required in Condition A.3 (not discussed during the September 13, conference call). The September 4, 2012 Approval covers cleanup and disposal of "Items" (defined in the Approval to include equipment and materials) at the RAAP. Disposal via a smelter must be supported by proper sampling of items that will be subject to that type of disposal. If the Army / LRA want to consult with the smelter facility of their choosing to inform the SAP required in Condition A.3, EPA supports that approach.

5. Condition A.3 (Sampling and analysis plan), analytical issue: The Army / LRA commented that not many laboratories run the Soxhlet extraction method and would request flexibility to instead use the Sonication extraction method. **EPA's preliminary response:** EPA's preferred extraction method is Soxhlet. In reference to the Army / LRA's comment, selection of the extraction method should be based on the matrix to be extracted. Paints and other non liquid PCBs are more effectively extracted via the Soxhlet method. Our experience indicate successful extraction of PCBs via Sonication is very much laboratory dependent and may not be the most effective extraction method for certain matrices such as paint. Preliminarily, EPA may consider the requested flexibility on the extraction method in context to the different matrices that would be subject to PCB extraction / analysis.

6. Use of abrasives for equipment cleanup. The Army / LRA indicated that certain equipment or items could be damaged if cleaned up via the use of abrasives and would like to propose other cleanup methods such as solvent stripping. **EPA preliminary response:** EPA may consider the Army / LRA's proposal in connection to specific equipment. Waste management, including containment, containerization, sampling for disposal, and disposal of the cleanup waste to be generated must be included as part of such proposals.

7. Disposal of waste containing PCBs at less than 50 ppm. The Army / LRA mentioned the September 4, 2012 Approval is silent on this matter and asked if EPA would approve the disposal site to where less than 50 ppm PCB waste would be taken for disposal. **EPA's preliminary response:** As the generator of the waste, the Army / LRA must meet all applicable TSCA, other federal, state, and local disposal requirements and select the appropriate off-site disposal facility that can accept the waste in compliance with operating permits from EPA or state and local regulatory agencies.

8. Condition B.4.a (Testing and cleanup of tenant equipment): The Army / LRA requested that EPA clarify which tenant equipment is covered under Condition B.4.a. Does the condition include personal or real property or both? **EPA's preliminary response:** EPA will clarify this

condition in response to the Army / LRA's question.

Please review the above summary and let me know if it accurately represents our September 13, 2012 dialogue.

Thank you for your courtesies and for sharing your preliminary comments on the September 4, 2012 Approval with me.

Sincerely,
Carmen

Carmen D. Santos
PCB Coordinator
RCRA Corrective Action Office (WST-5)
Waste Management Division
USEPA Region 9
415.972.3380
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!" Dr. Seuss



**RE: PCBs: Important: EPA's Phase 1 Approval for Riverbank Army
Ammunition Plant, Riverbank, CA (UNCLASSIFIED)
Switzer, Warren H CIV USARMY HQDA ACSIM (US)**

09/19/2012 12:15 PM

To: Carmen Santos
"Orloski, Edward F CTR (US)", Debbie Olson, "Woodyard, John
Cc: (John.Woodyard@WestonSolutions.com)", "McAllister, James P
SPK", "Lederle, Thomas E CIV USARMY HQDA ACSIM (US)".
This message is digitally signed.

"Switzer, Warren H CIV USARMY HQDA ACSIM (US)" <warren.h.switzer.civ@mail.mil>
Carmen Santos/R9/USEPA/US@EPA,
"Orloski, Edward F CTR (US)" <edward.f.orloski.ctr@mail.mil>, Debbie Olson
<DOlson@riverbankira.org>, "Woodyard, John (John.Woodyard@WestonSolutions.com)"
<John.Woodyard@WestonSolutions.com>, "McAllister, James P SPK"

History: This message has been replied to and forwarded.

Classification: UNCLASSIFIED
Caveats: NONE

Ms Santos -

Thank you for taking time to discuss our comments on the September 4 approval for cleaning equipment at Riverbank, and for your prompt e-mail with your informal responses.

We look forward to the meeting on Thursday 20 September, where we hope to clarify and resolve any remaining issues on the Phase 1 approval and receive your initial thoughts on the upcoming Phase 2 proposal.

In advance of the meeting, and in consideration of the limited available time, we are respectfully requesting via e-mail that the following approval conditions be amended or clarified:

Section A.2, Items not covered by the approval: The current language requires that we sample any items being disposed of in a PCB landfill. We propose that A.2 be amended to allow us to assume that any equipment or other items "containing PCBs as the result of a...release" (in this case from exfoliated Galbestos dust) be considered PCB Remediation Waste for purposes of disposal, and can be disposed of in a PCB landfill without sampling. This would include the items listed in A.2, as well as any painted or unpainted equipment for which cleaning for salvage is not feasible or not economically prudent.

Sections A.1, A.3, B.8 and B.9, Setting deliverable schedules: The approval requires that we submit several items to you within 30 days following the date of the approval. Because this requirement is infeasible at this point, we suggest that due dates be proposed for each item as part of the overall schedule, and that commencement of any work impacted by each deliverable begin after you have had sufficient time to review it and comment (typically 30 days). While a more formal project schedule will be sent shortly under separate cover, we propose the following general schedule:

* A.1 Building Inventory: A revised equipment inventory will be submitted within 30 days after our 20 September meeting. This inventory would be accompanied by cleaning method, proposed disposition, and any sampling data, to the extent possible for that equipment.

* A.3 Sampling and Analysis Plan (SAP): A draft SAP will be submitted within 30 days after our 20 September meeting.

* B.8 Sequence of Equipment Cleaning: A draft of our general cleaning plan and sequence will be submitted within 45 days following the 20 September meeting.

* B.9 Oil-filled equipment inventory: An inventory of all oil-filled equipment (including sampling results and lab reports) will be submitted to you at least 30 days before beginning work on any such equipment. (We project this would occur within 60 days following the 20 September meeting.)

Section A.3, Sampling Method: EPA has requested that we use Soxhlet extraction for pre-disposal analysis of paint samples from equipment. In our experience, Soxhlet is intended to extract PCBs from insoluble matrices such as soil, sludge and concrete. In comparison, paint samples need to be completely dissolved (typically in methylene chloride/acetone as required by Method 3550) and exchanged into hexane for analysis.

In the approval, EPA indicated it would consider allowing the use of sonication if we could achieve at least 65% recovery for two surrogates. However, because of the typical size of paint samples (1-2 grams), the concentration of PCB in the paint (up to 500 ppm), and the dilution required, surrogates are not a good measure of data quality because they usually get diluted out. Surrogates are a better QA/QC tool for soil and concrete samples, where the sample is larger and the concentrations are often lower. At high-concentration levels requiring dilutions (even for soil), there is no matrix-related QC; only laboratory QC such as appropriate calibrations, calibration verification checks at required frequency, and laboratory QC samples that meet laboratory criteria for recovery, including surrogate standard associated with these laboratory QC check samples.

We request that the approval be amended to allow the use of either method, subject to EPA's review of the corresponding laboratory SOPs for accuracy and precision, and agreement on acceptable laboratory QC protocols such as those mentioned above. The laboratory we have been using and will continue to use is DOD EIAP accredited and follows the procedures for QC and QA of the DOD Quality Systems Manual for Environmental Laboratories, Version 4.1 (it is the most rigorous EIAP protocol). The laboratory is also accredited under the state of California EIAP. We are confident that we can work with EPA and the laboratory to satisfy your need for high quality data.

Section B.1.a, Removal of coating from metal equipment: The approval allows removal of coatings using procedures "such as abrasive blasting/NACE #2". Some equipment items (e.g., presses projected for reuse) may be irrevocably damaged by the blasting grit. We propose using chemical paint stripping followed by confirmation wipe sampling for such equipment in lieu of potentially damaging blasting. The current language of the approval is general and may already allow this process, but we would like either confirmation from EPA that paint stripping is acceptable or clear language in the approval conditions.

Section B.2.a, Preparation of equipment for transportation. EPA approved our proposal to dust off any equipment destined for disposal to avoid cross-contamination, in which we indicated that we planned to solvent wipe the equipment. After further consideration, we propose to expand the list of dusting options to include vacuuming, detergent wiping and possibly pressure washing. If pressure washing is used, we plan to contain the area to avoid overspray, collect all water into tanks, and either:

(a) treat the water to <0.5 ug/L before discharge for irrigation, to

surface waters, or to the sanitary sewer in accordance with 40 CFR

761.79(b)(1)(iii), or
(b) remove the water for off-site treatment at a facility permitted to accept such material.

Section B.1.a, Paint containing <50 ppm PCB from Galbestos dust. The first full paragraph on Page 5 indicates that removed paint and blast media containing <50 ppm PCB can be disposed of as PCB remediation waste consistent with 40 CFR 761.61(a)(5), which includes disposal at a state-approved landfill permitted to accept this material. The approval, however, is silent regarding disposal of equipment coated with the same <50 ppm PCB paint. The current language of the approval is general and may allow this, but we would like either confirmation from EPA that disposal of such equipment in the same manner as removed paint is acceptable, or clear language in the approval conditions so stating.

Section B.4, Tenant Equipment. We understand that any fixed equipment that will remain at the RAAP is not part of this approval, and will be addressed in the (Phase 2) approval for building decontamination and Galbestos panel removal. Most of the non-fixed tenant equipment has been in the buildings for less than five years and is not likely to be contaminated, but we agree to include sampling of selected, non-fixed, tenant equipment as part of our SAP to confirm this. Wipe sampling of selected fixed equipment in the Phase 1 SAP also will be included as a precautionary measure, and paint sampling of fixed tenant equipment will be deferred until Phase 2. Any non-fixed tenant equipment tested and determined to be subject to the approval conditions will be cleaned or disposed of accordingly.

Again, thank you for your prompt response and we look forward to a productive exchange on 20 September.

Sincerely,

Warren Switzer, PhD
Program Manager for RBAAP
OACSIM BRAC-D
703-545-2515

-----Original Message-----

From: Carmen Santos [mailto:Santos.Carmen@epamail.epa.gov]

Sent: Tuesday, September 04, 2012 6:55 PM

To: Switzer, Warren H CIV USARMY HQDA ACSIM (US)

Cc: dolson@riverbanklra.org; Eric Esler; Ivan Lieben;

james.p.mcalister@usace.army.mil; John Chesnutt;

john.woodyard@westonsolutions.com; Lewis Mitani; Steve Armann

Subject: PCBs: Important: EPA's Phase 1 Approval for Riverbank Army Ammunition Plant, Riverbank, CA

Dear Mr. Warren Switzer:

I am resending the message addressed to you and sent by me on September 4, 2012 (transmitting Phase 1 Approval for RAAP, Riverbank, CA) because I pressed the "send" button too quickly, before I completed the subject line.

Thank you for your courtesies and patience.

Sincerely,

Carmen D. Santos

PCB Coordinator
RCRA Corrective Action Office (WST-5)
Waste Management Division
USEPA Region 9
415.972.3360
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you
can think up if only you try!" Dr. Seuss

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From: Carmen Santos/R9/USEPA/US
To: warren.h.switzer.civ@mail.mil,
Cc: dolson@riverbanklira.org, john.woodyard@westonsolutions.com,
james.p.mcalister@usace.army.mil, John Chesnut/R9/USEPA/USEPA, Eric
Esler/R9/USEPA/USEPA, Lewis Mitani/R9/USEPA/USEPA, Ivan
Lieben/R9/USEPA/USEPA, Steve Armann/R9/USEPA/USEPA
Date: 09/04/2012 03:36 PM
Subject: PCBs: Important:

Dear Mr. Warren Switzer:

A request was submitted by the LRA in Riverbank, California for a risk-based PCB cleanup at the RAAP buildings. EPA has divided its approval into Phase 1 and Phase 2. The attached letter is the Phase 1 approval and among other things, it involves equipment cleanup and disposal of wastes associated with that cleanup. In the letter we refer to this work as Phase 1 Work to be conducted under the Phase 1 Approval.

Please call me if you have any questions on the Phase 1 approval.

Sincerely,

Carmen D. Santos
PCB Coordinator
RCRA Corrective Action Office (WST-5)
Waste Management Division
USEPA Region 9
415.972.3360
santos.carmen@epa.gov

"Think left and think right and think low and think high. Oh, the thinks you

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P Before printing this e-mail think if it is necessary. Think Green!

Classification: UNCLASSIFIED

Caveats: NONE



**Clean-up particulars at former Riverbank Army Ammunition Plant (RBAAP)
(UNCLASSIFIED)**

Switzer, Warren H CIV USARMY HQDA ACSIM (US)

09/27/2012 12:48 PM

To: Carmen Santos
"Gibson, Jennifer L CTR USARMY HQDA ACSIM (US)"
Cc: "Orloski, Edward F CTR (US)", "Woodyard, John", Debbie
Olson, "McAllister, James P SPK", "Smith, Robert S CIV (US)".
This message is digitally signed.

From: "Switzer, Warren H CIV USARMY HQDA ACSIM (US)" <warren.h.switzer.civ@mail.mil>
To: Carmen Santos/R9/USEPA/US@EPA,
Cc: "Gibson, Jennifer L CTR USARMY HQDA ACSIM (US)" <jennifer.l.gibson66.ctr@mail.mil>,
"Orloski, Edward F CTR (US)" <edward.f.orloski.ctr@mail.mil>, "Woodyard, John"
<John.Woodyard@WestonSolutions.com>, Debbie Olson <DOlson@riverbankkira.org>.

Classification: UNCLASSIFIED
Caveats: NONE

Ms Santos -

Thank you for taking time last Thursday to discuss our comments on the September 4 approval for cleaning equipment at Riverbank Thursday. While we seemed to have successfully resolved most of the issues raised in my recent e-mail, you had requested additional detail regarding several points, particularly related to management of wastes generated during the equipment cleaning. The following information will hopefully meet your needs:

Section B.1.1.a, Removal of coating from metal equipment: EPA has agreed to allow the removal of paint from equipment using either blasting or chemical paint stripping.

Waste generated from blasting will be collected in drums meeting DOT Hazardous Material Regulation requirements and stored as PCB remediation waste in a designated storage area inside the RAAP. Blasting waste will be disposed of as PCB remediation waste at its existing concentration in accordance with 40 CFR 761.79(g).

Waste generated from chemical paint stripping will be collected and stored in the same manner as blasting waste. Chemical paint stripping waste will be incinerated at a facility meeting the requirements of 40 CFR 761.70(a) regardless of PCB concentration.

Section B.2.a, Preparation of equipment for transportation. EPA has agreed to allow us to dust off any equipment destined for disposal to avoid cross-contamination, using any techniques serving this purpose. Techniques we propose for dusting off the equipment include solvent wiping, detergent wiping, vacuuming, and pressure washing.

Solid waste generated from solvent wiping, detergent wiping and vacuuming will be collected and stored in the same manner as blasting waste. No PCB-impacted liquid waste will be generated during the use of these dusting methods. The solid wastes will be disposed of as PCB remediation waste, either based on the existing PCB concentration if sampling is feasible, (as will be the case with vacuum dust), or assuming the waste is >50 ppm if sampling is infeasible (as may be the case with rags).

Items being pressure washed will either be placed in a constructed plastic

or metal containment, with solid curbing and sufficient height to avoid escape of overspray. Items that cannot be moved and placed in a constructed containment will have a containment assembled around it in-place, meeting the same requirements as the constructed containment. Waste water generated during pressure washing will be collected with wet vacuums and stored in drums or other containers meeting DOT Hazardous Material Regulation requirements. Unless the containers are new, the containers' interior surfaces will first be sampled for PCB to avoid cross contamination of the waste water. We then plan to either: (a) treat the water to <0.5 ug/L before discharge for to the sanitary sewer in accordance with 40 CFR 761.79(b)(1)(iii), or (b) remove the water for off-site treatment at a facility permitted to accept such material. The containments will be disassembled after use, sampled, and disposed of according to their existing concentration.

I hope this fulfills your requirements for completing the approval. Please call either the undersigned or John Woodyard if you need additional information or clarification.

Sincerely,

Warren Switzer, PhD
Program Manager for RBAAP
OACSIM BRAC-D
703-545-2515

Classification: UNCLASSIFIED
Caveats: NONE

TETRA TECH EM INC.
TASK ORDER SUMMARY BY TASK
 Contract No. EP-W-07-019
 Reporting Period: 08/27/2012 - 09/30/2012



Task Order No: TO 054-20
 Date of Report: 10/09/12
 Project Manager: Patrick Woollever
 Phone No: 610-302-6240
 TO COR: Kevin Castro
 POP: 10/01/2010 - 12/31/2012
 Region: EPA Region 09

Title: Pollution Prevention and Resource Conservation
 TO Type: Technical Assistance
 Fixed Rate Ceiling: \$8,072.13
 % of Work Completed: 90.00%
 \$ of Work Completed: \$8,072.13
 Region: EPA Region 09

Related Invoice No: TO 054-20
 Estimate at Completion: 102,090.00
 Cumulative Paid: 83,504.71

Task No.	Task Name	Current Hours	Current Amount	Cumulative Hours	Cumulative Amount	% Funding	Approved Hours	Approved Amount
01	Waste Characterization Audits and Trainings	6.0	736.41	330.0	47,637.18	100.00%	390.0	47,351.00
02	Green Lodging Programs	7.5	631.01	350.0	37,434.94	69.39%	649.0	64,739.00
Total for Task Order 054		13.5	1,367.42	680.0	85,072.13	83.33%	939.0	102,090.00
Suspended			0.00		0.00			
Total Billed			1,367.42		85,072.13			

Business Confidential Information

TETRA TECH EM INC.
TASK ORDER SUMMARY
 Contract No. EP-W-07-019
 Reporting Period: 08/27/2012 - 09/30/2012



Task Order No: TO 054-20
 Date of Report: 10/09/12
 Project Manager: Patrick Woollever
 Phone No: 610-302-6240
 TO COR: Kevin Castro
 POP: 10/01/2010 - 12/31/2012
 Region: EPA Region 09

Title: Pollution Prevention and Resource Conservation
 TO Type: Technical Assistance
 Fixed Rate Ceiling: \$8,072.13
 % of Work Completed: 90.00%
 \$ of Work Completed: \$8,072.13
 Region: EPA Region 09

Related Invoice No: TO 054-20
 Approved Budget: 102,090.00
 Current Funded Amount: 102,090.00
 Cumulative Paid: 83,504.71

Task No.	Task Name	Current Hours	Current Amount	Cumulative Hours	Cumulative Amount
01	Waste Characterization Audits and Trainings	6.0	736.41	330.0	47,637.18
02	Green Lodging Programs	7.5	631.01	350.0	37,434.94
Total for Task Order 054		13.5	1,367.42	680.0	85,072.13
Suspended			0.00		0.00
Total Billed			1,367.42		85,072.13

Category	Current Hours	Current Amount	Cumulative Hours	Cumulative Amount
Labor Cost	13.5	1,776.22	484.0	61,048.87
Sr Engineer	13.5	1,776.22	484.0	61,048.87
Sr Environmental Scientist	0.0	0.00	0.5	66.64
Sr Environmental Scientist	0.0	0.00	213.6	18,648.88
Jr Environmental Scientist	0.0	0.00	0.0	0.00
Clerical / Admin	0.0	0.00	2.0	118.00
Total Labor Hours and Costs	13.5	1,776.22	680.0	79,799.29
Photocopies	(11.90)	77.27		
Mail/Delivery	0.00	87.08		
Telecommunications	0.00	32.12		
Computer	(177.82)	1,628.64		
Supplies	0.00	0.00		
Equipment Rental	0.00	0.00		
All Others	0.00	0.00		
Total Other Direct Costs	(188.12)	1,786.11		
Travel	0.00	3,008.28		
Subcontractors Costs	0.00	0.00		
G&A on Non-Labor	(18.88)	489.44		
TOTAL COSTS	1,567.42	86,072.13		
Suspended/Reinstated	0.00	0.00		
TOTAL BILLED	1,567.42	86,072.13		

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TETRA TECH EM INC.
CURRENT LABOR REPORT
 Contract No. EP-W-07-018
 Reporting Period: 08/27/2012 - 09/30/2012

Business Confidential Information

Task Order No.	TO Type:	% of Work Completed:	\$ of Work Completed:	Region:		
054	Pollution Prevention and Resource Conservation	90.00%	\$ 88,072.13	EPA Region 08		
	Technical Assistance					
	Fixed Rate Calling					
	Project Manager:					
	Date of Report:					
	10/09/12					
	Patrick Woollever					
	510-302-8240					
	Phone No:					
	Kevin Castro					
	10/01/2010 - 12/31/2012					
	TO COR:					
	POP:					
	10/01/2010 - 12/31/2012					
	Region:					
	EPA Region 08					
	\$ of Work Completed:					
	\$ 88,072.13					
	% of Work Completed:					
	90.00%					
	Region:					
	EPA Region 08					
Task Order No.	Employee Name	Rate	Current Hours	Current Amount	Cumulative Hours	Cumulative Amount
054	Winkler, Chauna D	57.99	1.0	58.00		
	Michaela, Jean M	131.57	1.0	131.57		
	Woollever, Patrick F	131.57	6.0	43,089.39		
	Brown, David L	111.07	0.5	65.54		
	Total for Tetra Tech		8.0	789.43	330.0	43,334.50
	Total for Task 01		8.0	789.43	330.0	43,334.50
02	Dancy, Mattie R	57.99	0.5	29.00		
	Winkler, Chauna D	57.99	0.5	29.00		
	Woollever, Patrick F	131.57	7.5	135.55		
	Henderson, Christine L	89.88	8.0	695.04		
	Total for Tetra Tech		13.5	1,776.22	205.5	17,853.64
	Total for Task 02		13.5	1,776.22	205.5	17,853.64
	Total for Task 04		21.5	2,565.65	660.0	87,189.04



TETRA TECH EM INC.
CURRENT OTHER DIRECT COST REPORT
 Contract No. EP-W-07-018
 Reporting Period: 08/27/2012 - 09/30/2012

Task Order No. 054
 Title: Pollution Prevention and Resource Conservation Technical Assistance
 TO Type: Fixed Rate Calling
 % of Work Completed: 90.00%
 \$ of Work Completed: \$ 88,072.13
 Region: EPA Region 08

Released Invoice No: TO064-20
 Date of Report: 10/09/12
 Project Manager: Patrick Woollever
 Phone No: 510-302-8240
 TO COR: Kevin Castro
 POP: 10/01/2010 - 12/31/2012

Vendor Name	Account Name	Office	Amount	Invoice #	Transaction Description
Task Number: 01	Task Name: Waste Characterization Audits and Trainings	103 Oakland	(48.01)		Computer Usage Time
Other Direct Costs	Other Direct Costs - Computer	103 Oakland	(48.01)		Computer Usage Time
Total for Task 01			(48.01)		
Task Number: 02	Task Name: Green Lodging Programs	103 Oakland	(129.81)		Computer Usage Time
Other Direct Costs	Other Direct Costs - Computer	103 Oakland	(11.39)		Reproduction (each)
Materials/Equipment	Other Direct Costs - Reproduction	103 Oakland	(141.11)		Reproduction (each)
Total for Task 02			(282.31)		
Total for Task Order 054			(330.32)		

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TETRA TECH EM INC.
TASK ORDER DISBURSEMENT HISTORY
 Contract No. EP-W-07-018
 Reporting Period: 8/27/2012 - 9/30/2012



Task Order No.	Title	TO Type	% of Work Comp.	\$ of Work Comp.	Region:
054	Position Prevention, Resource Conservation Assistance	00.00%	80.00%	\$85,072.13	EPA Region 9

Invoice Date	Ending	Invoice Number	Invoice Amount	Amount Paid	Amount Not Paid
03/09/11	02/27/11	TO 054-01	\$2,766.92	\$2,766.92	\$0.00
04/12/11	04/03/11	TO 054-02	\$2,631.92	\$2,631.92	\$0.00
05/10/11	05/01/11	TO 054-03	\$2,030.31	\$2,030.31	\$0.00
06/07/11	05/28/11	TO 054-04	\$5,653.15	\$5,653.15	\$0.00
07/12/11	07/03/11	TO 054-05	\$3,137.72	\$3,137.72	\$0.00
08/08/11	07/31/11	TO 054-06	\$5,006.63	\$5,006.63	\$0.00
09/06/11	09/28/11	TO 054-07	\$4,362.76	\$4,362.76	\$0.00
10/11/11	10/02/11	TO 054-08	\$787.88	\$787.88	\$0.00
11/08/11	10/30/11	TO 054-09	\$1,817.03	\$1,817.03	\$0.00
12/06/11	11/27/11	TO 054-10	\$4,172.45	\$4,172.45	\$0.00
01/10/12	01/01/12	TO 054-11	\$9,419.65	\$9,419.65	\$0.00
02/07/12	01/29/12	TO 054-12	\$9,339.88	\$9,339.88	\$0.00
03/06/12	02/26/12	TO 054-13	\$5,674.82	\$5,674.82	\$0.00
04/10/12	04/01/12	TO 054-14	\$11,089.54	\$11,089.54	\$0.00
05/08/12	04/29/12	TO 054-15	\$2,281.85	\$2,281.85	\$0.00
06/05/12	05/27/12	TO 054-16	\$7,297.66	\$7,297.66	\$0.00
07/10/12	06/30/12	TO 054-17	\$3,207.90	\$3,207.90	\$0.00
08/07/12	07/29/12	TO 054-18	\$1,749.77	\$1,749.77	\$0.00
09/04/12	08/28/12	TO 054-19	\$1,076.77	\$1,076.77	\$0.00
10/09/12	09/30/12	TO 054-20	\$1,587.42	\$1,587.42	\$0.00
TOTALS			\$85,072.13	\$85,604.71	\$0.00

TETRA TECH EM INC.
TASK ORDER MODIFICATION HISTORY
 Contract No. EP-W-07-018
 Reporting Period: 8/27/2012 - 9/30/2012



Task Order No.	Modification Number	Modification Date	Description	Funding
054	054			
	01	09/29/10	Award and partially fund the project	\$37,449.00
	01	02/25/11	Approve TOP dtd 3/8/11; add funding	\$9,641.00
	01	04/03/11	Approve TOP dtd 11/23/11; add funding; extend POP	\$0.00
	02	04/03/11	Clarify TO Ceiling Amount as \$48,205	\$0.00
	03	12/08/11	Approve TOP dtd 11/23/11; add funding; extend POP	\$40,000.00
	04	12/23/11	Administrative correction to Mod 3; extend POP	\$0.00
	06	04/05/12	Approve TOP dtd 4/2/12; add funding	\$16,000.00
	06	09/22/12	Approve TOP dtd 8/18/12; extend POP	\$0.00
TOTALS				\$102,090.00

Business Confidential Information

TETRA TECH EM INC.
TASK ORDER COST PERFORMANCE SELF-REPORTING
 Contract No. EP-W-07-018
 Reporting Period: 3/31/2012 - 9/30/2012



Task Order No.	Title	TO Type	% of Work Comp.	\$ of Work Comp.	Region:
054	Position Prevention, Resource Conservation Assistance	00.00%	80.00%	\$85,072.13	EPA Region 9

Task	Task Name	Costs	Complete	Value	Actual Costs	Over/Under	Score
01	Waste Characterization Training	\$47,351.00	100%	\$47,351.00	\$44,885.88	\$2,465.12	3.0
02	Green Lodging Programs	\$54,738.00	82%	\$44,885.88	\$37,434.94	\$7,450.94	3.0
TOTALS		\$102,090.00	90%	\$92,236.88	\$86,072.13	\$6,164.75	3.0

TETRA TECH EM INC.
TASK ORDER ON-TIME PERFORMANCE SELF-REPORTING
 Contract No. EP-W-07-018
 Reporting Period: 3/31/2012 - 9/30/2012



Task Order No.	Title	Task	Deliverable Name	Scheduled	Submitted	Date	On Time	Score
054		02	Final Public Green Lodging Program Matrix	04/18/12	04/18/12	04/18/12	Yes	5.0
		02	Program Matrix	04/18/12	04/18/12	04/18/12	Yes	4.0
		01	Program Matrix	04/18/12	04/18/12	04/18/12	Yes	4.0
		01	Final Public Green Lodging Program Matrix	05/10/12	05/10/12	05/10/12	Yes	4.0
		02	Assessment Development and Conformity	05/07/12	05/07/12	05/07/12	Yes	4.0
		01	Final Public Green Lodging Program Matrix	05/10/12	05/10/12	05/10/12	Yes	4.0
		01	Policy Workshop	05/10/12	05/10/12	05/10/12	Yes	4.0
		02	Assessment Development and Conformity	05/07/12	05/07/12	05/07/12	Yes	4.0
		02	Final Public Green Lodging Program Matrix	06/04/12	06/04/12	06/04/12	Yes	5.0
		02	Program Matrix	06/04/12	06/04/12	06/04/12	Yes	5.0
		01	Final Public Green Lodging Program Matrix	06/11/12	06/11/12	06/11/12	Yes	5.0
		02	Assessment Development and Conformity	06/07/12	06/07/12	06/07/12	Yes	4.0
		01	Final Public Green Lodging Program Matrix	06/10/12	06/10/12	06/10/12	Yes	4.0
		01	Policy Workshop	06/10/12	06/10/12	06/10/12	Yes	4.0
		02	Assessment Development and Conformity	06/07/12	06/07/12	06/07/12	Yes	4.0
		02	Final Public Green Lodging Program Matrix	07/23/12	07/23/12	07/23/12	Yes	4.0
		02	Program Matrix	07/23/12	07/23/12	07/23/12	Yes	4.0
		01	Final Public Green Lodging Program Matrix	08/10/12	08/10/12	08/10/12	Yes	4.0
		01	Characterization Follow-Up Report	08/10/12	08/10/12	08/10/12	Yes	4.0
		01	Final Public Green Lodging Program Matrix	08/14/12	08/14/12	08/14/12	Yes	5.0
		01	Final Public Green Lodging Program Matrix	08/14/12	08/14/12	08/14/12	Yes	5.0
		01	Characterization Follow-Up Report	08/25/12	08/25/12	08/25/12	Yes	5.0
TOTAL							83%	4.4

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